

Translation

PCT COOPERATION TREATY

PCT/JP2003/008135



# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference DK-221-PCT	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/008135	International filing date (day/month/year) 26 June 2003 (26.06.2003)	Priority date (day/month/year) 28 June 2002 (28.06.2002)
International Patent Classification (IPC) or national classification and IPC D04H 1/42, 1/72, D01F 9/08, F01N 3/28		
Applicant DENKI KAGAKU KOGYO KABUSHIKI KAISHA		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 12 November 2003 (12.11.2003)	Date of completion of this report 28 April 2004 (28.04.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

PCT/JP2003/008135

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

PCT/JP03/08135

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1-7	YES
	Claims		NO
Inventive step (IS)	Claims	4, 5	YES
	Claims	1-3, 6, 7	NO
Industrial applicability (IA)	Claims	1-7	YES
	Claims		NO

### 2. Citations and explanations

Document 1: JP, 2002-506166, A (UNIFRAX CORP.), 26 February 2002

Document 2: JP, 11-82006, A (DENKI KAGAKU KOGYO K.K.), 26 March 1999

#### Claims 1, 6, 7

The subject matter of claims 1, 6, and 7 does not involve an inventive step on account of document 1 and document 2 cited in the ISR.

Document 1 describes an invention pertaining to a support element for a catalytic converter consisting of ceramic fiber having an average diameter of about 1~14  $\mu\text{m}$ . The invention described in document 1 has adequate support strength, so it appears to have about the same specific surface area as the present application's invention.

Meanwhile, document 2 describes using an alumina staple fiber containing alumina 70~87 wt% and silica 30~13 wt%, and whose mineral composition comprises mullite 0~15 wt%, as a converter for cleaning automobile gas.

The inventions described in documents 1 and 2 have a common technical field in that they are ceramic fiber accumulations used in catalytic converters for automobiles, so employing the alumina staple fiber of the invention described in document 2 in the invention described in document 1 could easily be conceived by a person skilled in the art.

#### Claims 2 and 3

The subject matter of claims 2 and 3 does not involve an inventive step on account of document 1 and document 2 cited in the ISR.

Document 1 does not describe the amount of solid material or the bulk density in water of fiber, etc. recovered when water-sorting and grading crushed inorganic staple fiber accumulations, but the invention described in document 1 has adequate support strength, so it appears to have about the same strength characteristics as the present application's invention.

#### Claims 4 and 5

The subject matter of claims 4 and 5 is not disclosed in any of the documents cited in the ISR and is novel and involves an inventive step.